

In the claims:

1. (Currently Amended) A local area network adapted to supply power to powered devices over a plurality of paths thus supplying high power, the local area network comprising:

at least one powered device;

a hub adapted for communicating data to and from said at least one powered device;

communication cabling connecting said at least one powered device to said hub, said communication cabling comprising a first set of wire pairs utilized for communicating data between said at least one powered device and said hub and a second set of wire pairs different from said first set of wire pairs;

a first power output source adapted to supply and return a first power over at least a portion of said first set of wire pairs;

a second power output source adapted to supply and return a second power over at least a portion of said second set of wire pairs; and

a combiner operable operative to receive said first power over said at least a portion of said first set of wire pairs and to receive said second power over said at least a portion of said second set of wire pairs, said combiner being further operable operative to combine said received first power and said received second power to a combined high power output.

2. (Currently Amended) A local area network according to claim 1, wherein said combiner comprises a control circuit operable operative to sense the successful operation of said combiner, said control circuit supplying said combined high power output to said at least one powered device in response to said sensed successful operation of said combiner.

3. (Original) A local area network according to claim 2, wherein said control circuit is a controller.

4. (Currently Amended) A local area network according to claim 2, wherein said first power output source and said second power output source are associated with midspan power insertion equipment.

5. (Currently Amended) A local area network according to claim 4, wherein said first power output source is isolated from said second power output source.
6. (Currently Amended) A local area network according to claim 4, wherein said first power output source is not isolated from said second power output source.
7. (Currently Amended) A local area network according to claim 1, wherein said first power output source and said second power output source comprise separate outputs of a single power source.
8. (Currently Amended) A local area network according to claim 1, wherein said first power output source and said second power output source comprise separate outputs derived from a single power source.
9. (Original) A local area network according to claim 1, wherein said second set of wires are utilized for communicating data between said at least one powered device and said hub.
10. (Currently Amended) A local area network according to claim 1, wherein at least one of said first power output source and said second power output source are associated with midspan power insertion equipment.
11. (Currently Amended) A local area network according to claim 10, wherein said midspan power insertion equipment conforms to the IEEE 802.3af-2003 standard.
12. (Currently Amended) A local area network according to claim 1, wherein at least one of said first power output source and said second power output source are associated with said hub.
13. (Currently Amended) A local area network according to claim 12, wherein said at least one of said first power output source and said second power output source associated with said hub conforms to the IEEE 802.3af-2003 standard.

14. (Currently Amended) A local area network according to claim 1, wherein said first power output source is associated with said hub, and said second power output source is associated with midspan power insertion equipment.
15. (Currently Amended) A local area network according to claim 1, wherein said first power output source and said second power output source are associated with midspan power insertion equipment.
16. (Currently Amended) A local area network according to claim 1, wherein said first power output source and said second power output source are associated with said hub.
17. (Currently Amended) A local area network according to claim 1, wherein said hub adapted for communicating data to and from said at least one powered device operates according to at least one of 10 Base-T, 100 Base-T and 1000 Base-T ~~1000~~ Base-T.
18. (Currently Amended) A local area network according to claim 1, wherein said combiner is operable operative to signal at least one of said first power output source and said second power output source that that said combiner is operable operative to produce said high power output.
19. (Currently Amended) A local area network according to claim 18, wherein said signal signal operation comprises changing a change in the class identification.
20. (Original) A local area network according to claim 1, wherein said combined high power output is supplied to a load.
21. (Currently Amended) A local area network according to claim 20, wherein said load is operable in accordance with the IEEE 802.3af-2003 standard.
22. (Original) A local area network according to claim 20, wherein said load comprises at least one of: a wireless access point; a laptop computer; a desk top computer; a security camera having at least one of pan, tilt and zoom functionality; and an entrance control device.

23. (Original) A local area network according to claim 20, wherein said combiner is located within said load.

24. (Currently Amended) A local area network according to claim 20, wherein said load is ~~operable operative~~ in a low power mode and a high power mode ~~responsive to said combiner~~.

25. (Currently Amended) A local area network according to claim 24, wherein said combiner is further ~~operable operative~~ to supply low power to said load for operation of said load in said low power mode in the absence of said combined high power.

26. (Currently Amended) A local area network according to claim 25, wherein said combiner is further ~~operable operative~~ to signal said load of said low power supply operation.

27. (Currently Amended) A combiner for use with a powered device having high power needs, the combiner comprising:

a first power input adapted to receive a first power signal over a first set of wire pairs utilized to carry communication data;

a second power input adapted to receive a second power signal over a second set of wire pairs ~~different from said first set~~; and

~~a circuitry arranged to combine, wherein said received first power signal is combined with said received second power signal to produce a combined high power signal; and~~

~~a control circuit ~~operable operative~~ to sense said combined high power signal and to supply said combined high power signal to a powered device in response to said sensed combined high power signal.~~

28. (Currently Amended) A combiner according to claim 27, wherein said powered device is operable in accordance with the IEEE 802.3af-2003 standard.

29. (Original) A combiner according to claim 27, wherein said powered device comprises at least one of: a wireless access point; a laptop computer; a desk top computer; a security camera having at least one of pan, tilt and zoom functionality; and an entrance control device.

30. (Original) A combiner according to claim 27, wherein said combiner is located within said powered device.

31. (Original) A combiner according to claim 27, wherein said combiner is located outside of said powered device.

32. (Currently Amended) A combiner according to claim 27, wherein said combiner is operable operative in a low power mode in the absence of said sensed combined high power signal.

33. (Currently Amended) A combiner according to claim 27, wherein said control circuit is further operable operative to supply a low power signal to said load for operation in a low power mode in the absence of said combined high power signal.

34. (Currently Amended) A combiner according to claim 33, wherein said control circuit is further operable operative to signal said load of said low power mode.

35. (Original) A combiner according to claim 27, wherein said control circuit is a controller.

36. (Currently Amended) A combiner according to claim 27, wherein said circuitry arranged to combine further comprising comprises at least one DC/DC converter.

37. (Currently Amended) A combiner according to claim 27, further wherein said circuitry arranged to combine comprising comprises a first DC/DC converter associated with said first power input and a second DC/DC converter associated with said second power input.

38. (Original) A combiner according to claim 37, wherein said first DC/DC converter is connected in series with said second DC/DC converter.

39. (Original) A combiner according to claim 37, wherein said first DC/DC converter is connected in parallel with said second DC/DC converter.

40. (Currently Amended) A combiner according to claim 37, wherein said circuitry arranged to combine further comprising comprises a first PWM/resonance controller associated with said first DC/DC converter and a second PWM/resonance controller associated with said second DC/DC converter.

41. (Currently Amended) A combiner according to claim 27, wherein said circuitry arranged to combine further comprising comprises a transformer having a first primary associated with said first power input and a second primary associated with said second power input.

42. (Original) A combiner according to claim 41, wherein said transformer comprises a secondary associated with said combined high power.

43. (Currently Amended) A method of supplying power to a powered device comprising the steps of:

- a) receiving a first power signal over a first set of wire pairs;
- b) receiving a second power signal over a second set of wire pairs different from said first set;
- c) combining said received first power signal and said received second power signal;
- d) sensing the success of said combining of said received first power signal and said received second power signal; and
- e) enabling a combined high power output comprising said received first power signal and said received second power signal in response to said sensing.

44. (Currently Amended) A method of supplying power to a powered device according to claim 43, further comprising the steps of:

- f) sensing an unsuccessful combining of said received first power signal and said received second power signal;
- g) comparing at least one of said first and said second received power signal to a reference; and
- h) supplying low power from one of said received first power signal and said received second power signal in response to said comparing.

45. (Original) A method of supplying power to a powered device according to claim 44, further comprising the step of:

- i) signaling the powered device of said supplied low power.

46. (Currently Amended) A method of supplying power to a powered device according to claim 43, further comprising the step of:

- j) signaling at least one of ~~at least one of~~ the source of said received first power signal and the source of said received second power signal of said combining.

47. (Original) A method of supplying power to a powered device according to claim 46, wherein the step of signaling comprises changing the classification.